

## **REMARKS**

Applicant would first like to thank Examiner Hanley for this examination.

Claims 1-11 and 13 are currently pending in the application, and claims 1, 2 and 5-7 stand rejected under 35 USC 102 (b) as being anticipated by US Pat. No. 2,175,361 to Reger et al. (hereafter Reger). Claims 3-4, 8 and 10-13 stand rejected under 35 USC 103(a) as being obvious over Reger in view of US Patent No. 6,204,598 to Bruggemann et al. (hereafter Bruggemann).

## **SPECIFICATION**

The office action objects to the title as not being descriptive of the invention. Applicants respectfully disagree. The title, as amended, clearly describes the claimed end of life element. Accordingly, Applicants contend that the title, “High Pressure Discharge Lamp With End of Life Device” meets all statutory requirements.

The office action provides guidelines for arrangement of a specification. Applicant appreciates this information and respectfully contends that the application, as provided, meets all statutory requirements.

## **CLAIM REJECTIONS - 35 USC 102**

Claims 1, 2 and 5-7 stand rejected under 35 USC 102 as being anticipated by US Pat. No. 2,175,361 to Reger et al. (hereafter Reger).

Applicant respectfully contends that claim 1 is allowable because it includes a feature that is neither disclosed nor suggested by Reger or any other reference cited, namely “at least one of the lamp base (8), the first contact member and the second contact member (14, 15) are configured to form an end-of-life device that fails upon the occurrence of an arc discharge” As clearly pointed

out in the present application, Applicants have determined that a glow discharge problem occurs in known discharge lamps. Moreover, the inventors have provided a solution to this problem by configuring at least one of the base, the first contact member and the second contact member as an end-of-life device. The present invention controls the end of life for the lamp by forming one of the previously described elements to fail (i.e., deform or crack) under the stress of an arc discharge. Reger does not discuss the concept of end-of-life management, end-of-life devices, or the glow discharge problem which the end-of-life devices address.

The office action suggests that Reger discloses the limitations of claim 1 and therefore will function as an end-of-life device. Applicants respectfully disagree. “Functioning as an end-of-life device” is a limitation that Reger neither discloses nor suggests. In order to function as an end-of-life device, the lamp base or one of the contacts must deform or crack under the specified conditions (here the stress of an arc discharge). This prevents the lamp from overheating when an arc discharge occurs, and therefore prevents damage to the outer envelope and wiring of the lamp. As specifically provided in the present application, the lamp base may be configured to function as an end-of-life device by forming it of soft glass with a softening point which will cause it to deform or crack before excessive temperatures are reached. Reger is silent regarding the properties of the lamp base, other than to identify that it is a ceramic material comprising approximately 50% titanium oxide and approximately 50% magnesium oxide. Similarly, the contacts may be formed to fail upon the occurrence of an arc discharge, such as by designing them with dimensions and composition that will fail under the specified stress. Reger does not disclose or suggest that the lamp base or contacts are designed to fail.

The other references do not provide what Reger lacks. In fact Bruggemann teaches away from the present invention providing for a lamp base with a softening point of about 680 degrees centigrade.

The Office Action also argues that a lamp base or contact configured to form an end of life device is functional and not structural. Applicants respectfully disagree. An end of life device is

a structural feature typically comprising structural manifestations known in the art, such as dimensional control, material composition, and combinations thereof. Moreover, the dimensions and/or composition required to assure that the base or contact will fail under the stress of form an end of life device are not static, but vary with the size and power of the lamp and with each other. However, these characteristics may easily be designed for a specific lamp by a person of ordinary skill in the art. The structural feature of a lamp base or contact configured to form an end of life device is neither disclosed nor suggested by the cited references.

Claims 2 and 5-7 depend from claim 1 and Applicant respectfully contends that they are allowable for the reasons presented above.

### **CLAIM REJECTIONS - 35 USC 103**

Claims 3-4, 8, and 10-13 stand rejected under 35 USC 103 (a) as being obvious over Reger in view of U.S. Patent No. 6,204,598 to Bruggemann et al. (hereafter Bruggemann). Claims 2-4 and 7-8 depend from claim 1 and Applicant respectfully contends that they are allowable for the reasons claim 1 is allowable.

Applicants respectfully contend that claim 10 is also allowable for the reason that includes another feature that is neither disclosed nor suggested in Reger, Bruggemann or any other reference, namely “the base comprises a soft glass having a softening point such that the base deforms or cracks under a thermal stress of an arc discharge”. The cracking of the soft glass base under a thermal stress of an arc discharge constitutes an end of life device in this embodiment. The Office Action suggests that Bruggemann discloses a soft glass base, and that it would be obvious to use the soft glass base of Bruggemann in the lamp of Reger because soft glass is highly compatible with NiFeCr leads , and that since the combination of Reger and Bruggemann disclose the structure and materials of claim 10 the base will deform or crack under a thermal stress of an arc discharge. Applicants respectfully disagree. Just because some soft glass bases will deform or crack under a thermal stress of an arc discharge, that does not mean that it is

inherent in soft glass. Many other factors contribute to the stress that will cause deformation/cracking including the specific composition of the soft glass, the fabrication process, dimensions of the soft glass, the power of the lamp and the like. Neither Reger nor Bruggemann disclose or suggest a base adapted to deform or crack under a thermal stress of an arc discharge.

Applicants respectfully contend that Claim 13 is also allowable for the reason that includes another feature that is neither disclosed nor suggested in Reger, Bruggemann or any other reference, namely “at least one of the first contact member and the second contact member is configured to form a fuse”. The Office Action argues that Bruggeamm teaches this feature because it discloses contact members made from oxidized nickel-iron-chromium material. Applicants respectfully disagree. Merely because the contacts are made from a similar material does not mean that they are configured to perform as a fuse. A fuse is adapted to fail under specific conditions and typically comprises a combination of material and dimensional features to achieve this. Neither Reger nor Bruggemann disclose or suggest contacts configured to be fuses.

Claim 9 stands rejected under 35 USC 103 (a) as being obvious over Reger in view of U.S. Patent Publication No. 2003/0076041 to Honda et al. (hereafter Honda). Claim 9 depends from claim 1 and Applicant respectfully contends that it is allowable for the reasons claim 1 is allowable.

**CONCLUSION**

In view of the amendments and arguments presented herein, Applicant respectfully contends that claims 1-11 and 13 are in condition for allowance. Accordingly, Applicant respectfully requests entry of the amendments, reconsideration and allowance of claims 1-13 and issuance of letters patent.

Respectfully submitted,

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